ATTACHMENT 1

STATE OF ALASKA

THE REGULATORY COMMISSION OF ALASKA

Before Commissioners:

Mark K. Johnson, Chair
Kate Giard
Dave Harbour
James S. Strandberg
G. Nanette Thompson

In the Matter of the Petition by GCI COMMUNICATIONS CORP. d/b/a GENERAL COMMUNICATION, INC. and GCI for Arbitration Under Section 252 of the Telecommunications Act of 1996 with the MUNICIPALITY OFANCHORAGE d/b/a ATU TELECOMMUNICATIONS a/k/a ATU TELECOMMUNICATIONS for the Purpose of Instituting Local Competition.	U-96-89

PREFILED DIRECT TESTIMONY
OF
RICHARD CABE

ON BEHALF OF
GENERAL COMMUNICATION, INC. (GCI)

August 29, 2003

I. INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Richard Cabe and my business address is 221 I Street, Salida, Colorado.

Q. PLEASE BRIEFLY DESCRIBE YOUR PROFESSIONAL BACKGROUND.

A. I am an economist in private practice, specializing in economic analysis of regulatory matters in the telecommunications industry. I have presented testimony in matters concerning competition in the telecommunications industry to the public utility commissions of Alabama, Arizona, Colorado, Florida, Georgia, Iowa, Kentucky, Louisiana, Mississippi, Nevada, New Mexico, North Carolina, Oregon, South Carolina, Tennessee, Texas, Utah and Washington, and to the Federal Communications Commission. Until May of 1999, I was employed as Associate Professor of Economics and International Business at New Mexico State University. In that position, I taught graduate and undergraduate economics courses and arranged the telecommunications curriculum for conferences sponsored by the Center for Public Utilities. Over my last several years at the university, I offered graduate courses in Industrial Organization, Microeconomic Theory, Antitrust and Monopoly Power, Game Theory, Public Utilities Regulation, and Managerial Economics for MBA students. My experience with telecommunications regulation began in January of 1985 when I was employed by Washington Utilities and Transportation Commission. During my employment at the Washington Commission, I served as a staff member to the Federal - State Joint Board in CC Docket No. 86-297. When I left the

Commission staff to complete my doctoral degree, my title was Telecommunications Regulatory Flexibility Manager. My consulting clients since I left the Washington Commission have included aspiring new entrants into the local telecommunications market, state commissions, and consumer advocates. My resume is attached as Exhibit RC-1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. GCI asked me to prepare testimony for the Commission on two topics. First, I address the wholesale discount rate used to calculate wholesale prices of ACS services that GCI resells at the retail level. Next, I consider data available on UNE loop rates approved by commissions around the country, with a view to providing a statistical evaluation of the reasonableness of UNE loop rate proposals that may come before the Commission in this proceeding.

Q. PLEASE SUMMARIZE YOUR TESTIMONY REGARDING THE WHOLESALE DISCOUNT.

A. My testimony regarding wholesale prices presents a simple model that calculates a wholesale discount rate to reflect the costs that ACS will avoid when it is no longer required to provide retail services to customers who switch to receive retail service from GCI. My calculation results in a wholesale discount rate of 33.3%. I describe the context in which the Commission will determine wholesale prices. Next, I derive the formula used to calculate a discount percentage in order to be able to discuss with some precision the conceptually correct data for

the elements of the formula. I describe a complication that arises from application of the formula to the telecommunications setting in which jurisdiction over rates for local exchange companies is shared between the state and federal governments. In this setting, the rules currently in place for separation of costs between jurisdictions and recovery of the inter-state share of costs leaves the Commission with a choice between two imperfect alternatives. I discuss the options open to the Commission, and finally recommend the alternative that allows ACS to recover more than its revenue requirement during an interim period of regulatory lag at the federal jurisdiction; allows ACS to recover no more than its revenue requirement after the interim; and disadvantages GCI by requiring it to pay ACS in wholesale rates for certain retail functions that ACS no longer provides and which GCI must also incur the costs of performing on its own for its retail customers. A major part of the basis for my recommendation of this less than ideal arrangement is that it provides excess revenue to ACS for a period that will allow ACS to take actions necessary to actually avoid any costs that may be avoidable only after some delay. I discuss the distinction between avoided and avoidable costs relied on by the Eighth Circuit Court of Appeals when it vacated wholesale discount rules adopted by the Federal Communications Commission (FCC). After considering the pertinent theoretical constructs and available empirical evidence, I conclude that the only substantive difference between costs that will be avoided and those that are merely avoidable is that a period of adjustment may be required to actually avoid some costs that are avoidable. The regulatory lag in the federal jurisdiction mentioned

above provides an appropriate mechanism to allow ACS to recover its costs during any adjustment period, yet leave incentives intact for ACS to act vigorously to avoid costs that are avoidable. Finally, I discuss the mechanics of the calculations necessary to arrive at a wholesale discount that conforms to the requirements of the Telecommunications Act of 1996[1].

Q. PLEASE SUMMARIZE YOUR TESTIMONY REGARDING UNE LOOP RATE PROPOSALS IN THIS PROCEEDING.

A. I present a simple statistical analysis to show the relationship between UNE loop rate proposals that either party may propose and UNE loop rates approved by commissions around the country. This type of statistical analysis can be very useful to the Commission in evaluating the reasonableness of either party's proposed UNE rates relative to rates that other commissions have approved around the country. This analysis is not intended to replace, or even augment, direct estimation of forward-looking TELRIC costs, but rather to provide a means by which to consider the reasonableness of proposed rates in light of the outcomes of other commissions' deliberations regarding TELRIC-based UNE loop rates. ACS' application of its cost model produces UNE loop rate proposals that are very high relative to UNE loop rates that have been approved by state commissions around the country. In a regression analysis that takes into account differences in embedded costs, the rate proposals that result from ACS' application of its cost model are consistently high, approximately double the

[1] Telecommunications Act of 1996, Pub.L. No. 104-104, 110 Stat. 56 (the Act)

expected UNE rate based on commission-approved rates from 48 states and the District of Columbia. ACS' existing rates and GCI's proposed UNE loop rate all fall within the 90% confidence interval. As a statistical matter, at the 90% confidence level, we cannot reject the hypothesis that existing rates or the current GCI proposal, arise from the same statistical process that determined the rates approved by other commissions around the country. On the other hand, by the same statistical test, it is very clear that ACS' proposals are not reasonable in light of other commission-approved UNE loop rates.

CONCEPTUAL BASIS FOR WHOLESALE DISCOUNT

Q. PLEASE DESCRIBE THE ROLE PLAYED BY WHOLESALE DISCOUNTS IN THE DEVELOPMENT OF COMPETITION IN LOCAL TELECOMMUNICATIONS MARKETS.

A. The Act prescribes three paths by which new entrants can engage in competition in the local telecommunications market: resale of the incumbent's services purchased at a wholesale discount, provision of service through the use of Unbundled Network Elements (UNEs) purchased from the incumbent, and provision of service entirely with the entrant's facilities, requiring only interconnection with the incumbent for the exchange of traffic. These paths are not mutually exclusive, and one would expect that all three would be in use simultaneously. GCI employs all three paths.

Each type of entry provides a different form of competitive discipline in the formerly monopolized market. Entry through the resale path cannot provide

market discipline to the incumbent's wholesale operations, but does expose the incumbent to market discipline in its retail operations, and allows a potential competitor to enter the market before completing the arduous investment project of developing facilities to provide ubiquitous service in an area. Competition at the retail level between a pure retailer and a wholesale provider that also sells at retail is not uncommon in unregulated markets.

Q. HOW ARE WHOLESALE PRICES TO BE DEVELOPED?

A. The Act prescribes the manner in which wholesale prices are to be computed:

> "For the purposes of section 251(c)(4), a State commission shall determine wholesale rates on the basis of retail rates charged to subscribers for the telecommunications service requested, excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier." §252(d)(3)

In essence, the Act articulates the outcome that would result from vigorous competition among wholesale providers of local telecommunications services, if such competing providers were present. With a competitive market for wholesale services, a retailer would be able to solicit proposals from competing wholesalers.[2] Any proposal that attempted to extract payment for retailing functions that the wholesaler doesn't perform would simply be rejected in favor of

[2] In a competitive wholesale market it is likely that wholesale rates would reflect different discounts for different services. While different discount rates for different services might be appropriate, arbitrating such rates in the absence of competition at the wholesale level would present greater difficulties for the arbitrator, and greater opportunities for the incumbent to take advantage of its superior access to information in advocating different wholesale discounts to serve its own strategic purposes.

an alternative wholesaler's proposal. The Act compels this result by directing the removal of all retailing costs that a wholesale provider will avoid.

In its First Report and Order in Docket 96-98, the FCC interpreted the Act "as requiring states to make an objective assessment of what costs are reasonably avoidable when a LEC sells its services wholesale."[3] On appeal, the Eighth Circuit Court of Appeals found that the Act's "phrase 'will be avoided' refers to those costs that the ILEC will actually avoid incurring in the future, because of its wholesale efforts, not costs that 'can be avoided.'"[4] The Court reasoned that "[i]f the Congress had meant the standard to be one of reasonable avoidability, it could have easily said so."[5] The Court vacated and remanded the FCC's rule 51.609, which defined avoided retail costs as "those costs that reasonably can be avoided when an incumbent LEC provides a telecommunications service for resale at wholesale rates to requesting carrier."[6] The FCC has not as yet promulgated new rules to replace 51.609.

[3] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers,* CC Docket Nos. 96-98, 95-185, First Report and Order, FCC 96-325, Adopted August 1, 1996 (First Report and Order) at ¶ 911

[4] Iowa Utilities Board, et al., Petitioners, v. Federal Communications Commission and United States of America, Respondents (Eighth Circuit Order), at page 17

[5] *Id.*

[6] 47 C.F.R. §51.609(b)

Q. IN THE ABSENCE OF BINDING RULES PROMULGATED BY THE FCC, HOW HAVE YOU FORMED YOUR OPINION AS TO THE APPROPRIATE WHOLESALE DISCOUNT TO BE APPLIED TO ACS' RETAIL RATES?

A. In developing the analysis presented in this testimony, I was instructed by counsel to form an opinion as to costs "that the ILEC will actually avoid incurring in the future," in accordance with the Eighth Circuit's Decision. In forming my opinion I have reviewed the FCC's discussion of the substantial record developed in CC Docket 96-98, and I have relied on the FCC's analysis insofar as it is not in conflict with the Eighth Circuit Decision. According to the Eighth Circuit standard, costs to be avoided "in the future" must be used to establish wholesale rates today, and this exercise in projecting actual cost avoidance must necessarily rest on an opinion as to the portion of avoidable costs that will actually be avoided. In other words, the first step to estimating the amount of cost that will be avoided is to estimate the amount of cost that is avoidable. The FCC conducted extensive analysis of a very large body of commentary from all interested parties, and reached conclusions regarding expenses that should be presumed to be "avoidable," absent an ILEC showing that such expenses should not be treated as avoidable. ACS' filings prior to the Eighth Circuit's vacating of the FCC's rules made no attempt at such a showing. For the purpose of this analysis, I will rely on the FCC's conclusions regarding accounting classifications of expenses that are appropriately regarded as "avoidable," without relying on the FCC's identification of "avoidable" with "avoided." It was this latter identification to which the Eighth Circuit objected; the Eighth Circuit did not object, nor have ACS' previous wholesale discount models objected, to the FCC's conclusions as

to what accounting classifications of expenses are properly regarded as "avoidable." Starting from the preliminary conclusion that certain expenses are "avoidable," I form an opinion as to the portion of those costs that will actually be avoided, and calculate a wholesale discount accordingly.

A. DERIVE DISCOUNT FORMULA, EXPLAIN RATIONALE FOR NUMERATOR AND DENOMINATOR

Q. WHOLESALE PRICES ARE GENERALLY CALCULATED BY APPLYING A DISCOUNT PERCENTAGE TO RETAIL PRICES. PLEASE DESCRIBE THE FORMULA THAT IS USED TO CALCULATE THE WHOLESALE DISCOUNT.

A. The formula is straightforward, but devoting some attention to where it comes from is essential to understanding the parts of the formula, what data is used by the formula, and how it should be applied. First, according to the Act, wholesale prices are calculated by starting with retail prices and subtracting "marketing, billing, collection, and other costs that will be avoided by the local exchange carrier." In order for this subtraction to involve similar units, avoided costs must be expressed on a per unit basis; that is, total avoided costs must be divided by quantity. This suggests the following formula:

Wholesale Price = Retail Price – Avoided Cost / Quantity

This is the basic formula required by the Act, and does not mention a discount percentage. In practice, wholesale price is calculated by applying a discount factor to a retail price and subtracting the result from the retail price.

Wholesale Price = Retail Price – Discount * Retail Price

In order for these two equations to reach the same result, the right hand elements of the two equations must be equal:

Avoided Cost / Quantity = Discount * Retail Price

Solving for the discount factor requires dividing both sides of the equation by the retail price. Thus:

Avoided Cost / (Quantity * Retail Price) = Discount

Recognizing that the product of retail price and quantity is retail revenue, we've reached the result that the discount factor is calculated as the ratio of avoided cost and retail revenue.

Avoided Cost / Retail Revenue = Discount

The universal assumption made by using a discount factor rather than the basic formula implied by the language of the Act is that it is appropriate to apply the same proportionate reduction to the prices of all retail services.[7] The advantage of taking this approach is that the discount formula requires only total, rather than per unit, amounts. Both the numerator, avoided cost, and the denominator, retail revenue, are measured in dollars rather than dollars per unit. Both amounts can be taken from the company's books of account.

Deriving the discount formula from the requirements of the act allows a clear understanding of the conceptual basis for the formula, and resolves some questions that may arise as to interpretation of components of the formula. For

[7] As noted above, different discount levels for different services may be appropriate in some circumstances, but this more complex approach is more difficult for the arbitrator and creates opportunities for the incumbent to exploit its superior access to information for its own strategic advantage.

example, it can be seen very clearly in this derivation that the denominator is strictly retail revenue, having been derived from the statutory starting point of retail rates. The denominator cannot include any revenue from services sold at wholesale or UNEs, because none of the rates generating these revenues are retail rates subject to wholesale discounting.

B. Complication Associated with Revenue Offset from Jurisdictional Separations

Q. PLEASE EXPLAIN THE COMPLICATION THAT ARISES FROM JURISDICTIONAL SEPARATIONS.

A. Through the process of jurisdictional separations, recovery of part of ACS' costs occurs through the interstate jurisdiction. Part 36 of the FCC's rules prescribes the allocation of costs between the State jurisdiction and the interstate jurisdiction. ACS' interstate revenue requirement is determined by a formula that includes some costs that will be avoided when an ACS customer switches to be served at the retail level by a CLEC using ACS wholesale service. After these costs have been avoided, and the cost reduction is reflected in ACS' accounting records, and reported interstate revenue requirement falls, ACS' interstate revenue will be reduced so as to recover no more than the reported interstate revenue requirement. This amounts to a delayed revenue offset for the interstate share of cost avoided when ACS no longer provides retail level service to a customer.

If the interstate share of avoided retail costs is included in the wholesale discount, then these costs will not be recovered through wholesale rates; and,

after the interstate revenue offset takes effect, ACS' revenue stream will be reduced again to offset the cost reduction. If the interstate share of avoided cost is removed from wholesale rates, when an ACS customer switches to a reseller, ACS experiences a cost reduction and offsetting revenue reduction in the form of the wholesale discount, and, after a lag, experiences another revenue reduction at the interstate jurisdiction to offset the same cost saving. On the other hand, if the interstate share of avoided retail costs is not included in the wholesale discount, then this amount of cost is recovered in wholesale rates, and is also recovered through interstate revenues until a new interstate revenue requirement reflecting the avoided costs is established and interstate revenue is reduced to offset the cost reduction. Eventually, interstate revenue will be offset, but in the interim ACS will avoid certain costs but continue to receive revenue calculated to recover those costs.

Q. HOW LONG IS THE PERIOD YOU REFER TO AS "INTERIM," BEFORE ACS' COST AVOIDANCE IS INCORPORATED INTO INTERSTATE REVENUE REQUIREMENT AND THE REVENUE OFFSET IS IMPLEMENTED?

A. Because ACS' cost recovery at the interstate jurisdiction is accomplished through several mechanisms, with differing schedules and reporting requirements, there is no easy answer to this question. The basic effective duration of interstate access tariffs is two years, but the various cost recovery mechanisms under the interstate jurisdiction include optional updating, projections for future periods and true-up to incorporate actual cost data after the fact. The relevant time scale in which to consider this question is the term of the interconnection agreement

during which the adopted wholesale discount rate will apply - 5 years. Relative to that time scale, it appears that the interim during which ACS will continue to recover avoided costs through the interstate jurisdiction is a substantial period. Again, this amounts to double recovery if interstate-allocated avoided costs are included in wholesale rates.

Q. YOU MENTIONED TWO POSSIBLE TREATMENTS OF INTERSTATE-ALLOCATED COSTS THAT ACS WILL AVOID WHEN A RETAIL CUSTOMER IS LOST TO A RESELLER. PLEASE DESCRIBE THE COMPETITIVE IMPLICATIONS OF THESE TWO ALTERNATIVES.

A. One possible treatment is to develop wholesale rates that include avoided retail costs that are allocated to the interstate jurisdiction. The retailing costs that ACS will avoid when a retail customer switches to a reseller represent functions that will have to be performed by the reseller, and the reseller will have to incur costs to perform those functions. If the interstate-allocated costs that ACS avoids when a retail customer switches providers are not included in the discount (that is, they are included in the wholesale rate) then a new entrant using the wholesale avenue of entry will have to pay a wholesale rate that includes part of the cost of performing certain retailing functions, and the entrant will also have to incur its own costs to perform those same functions internally. Under this approach, ACS' revenues cover this cost twice until the avoided cost is offset in the interstate jurisdiction, after which ACS costs and revenues are balanced, assuming they were in balance before the customer's switch of providers. This approach clearly places the entrant at a disadvantage relative to ACS.

The alternative approach is to include the interstate share of avoided costs in the discount, establishing wholesale prices that do not recover these costs. Under this approach, an entrant paying wholesale prices will not be required to pay twice to accomplish retailing functions covered by the interstate share of ACS' avoided retail costs. Nor will an entrant be forced to contribute to ACS' over-recovery in the interim, before implementation of the interstate revenue offset, for retailing functions that ACS doesn't perform and that the entrant also has to provide on its own for its retail customers. In this scenario, there is an initial period during which ACS does not provide the retailing function, and does not recover the cost of the function through wholesale rates. During this initial period the entrant does provide the retailing function and must incur the costs of doing so, but does not pay ACS through wholesale rates for the function that ACS does not perform. After this interim period ACS' interstate revenue will be adjusted to account for costs that ACS no longer incurs to provide retailing functions for customers lost to resellers. After this revenue offset is implemented, and for the remainder of the interconnection agreement, ACS will be disadvantaged in the amount of the interstate share of costs avoided.

These effects are summarized in the following table.

		Interim	After Interstate Revenue Offset
No Discount For Interstate Share	**Effect on ACS**	Over-Recovery	Cost – Revenue Balance
	Effect on Entrant	Pays twice for some retail functions	
Discount For Interstate Share	**Effect on ACS**	Cost – Revenue Balance	Under-recovery
	Effect on Entrant	No duplicate payment in wholesale rates for self-provided retail functions	

Competitive Effects of Discounting for Interstate-Allocated Avoided Costs

Q. DID YOU CONSIDER OTHER FACTORS IN DEVELOPING YOUR RECOMMENDATION?

A. Yes. First, it should be noted that the effects described above create a dilemma not anticipated in the Act, nor resolved by subsequent interpretations of the Act by the FCC or the Eighth Circuit. The Act clearly intended for wholesale prices to allow efficient competition to develop at the retail level, with some providers relying on the incumbent for wholesale functions. In the absence of competition at the wholesale level to establish competitive wholesale prices, the Commission must play the role of establishing a wholesale discount that mimics competition at the wholesale level and results in a wholesale price that doesn't include retailing costs that will be avoided by the incumbent. But it is not a straightforward matter how to accomplish this aim with regard to avoided costs allocated to the interstate jurisdiction. And the problem is exacerbated by the lag in application of

the revenue offset in the interstate jurisdiction, which may approach, but probably doesn't coincide with the life of the interconnection agreement.[8]

Another factor that may bear consideration is the timing of cost avoidance. While many retailing costs are automatically avoided when a customer switches retail providers, avoiding other costs may require some action on the part of ACS management, and may require some passage of time. For example, when a customer is no longer served on a retail basis ACS will no longer have to pay for postage to render a bill to that customer, or for paper to print the bill on, or supplies for the printers used to print bills. The cost of postage and supplies for retail bills simply disappears as soon as a customer switches retail providers, and avoiding these costs requires no action on the part of ACS management. When retail customers switch away from ACS, the workload of ACS employees engaged in preparing and rendering bills will decline. Insofar as ACS previously paid overtime for some of these functions, labor cost will decline automatically and immediately as a result of a decrease in workload. If the decline in workload doesn't simply reduce overtime wages, but requires reassignment of employees, then ACS management must act in order to realize the cost saving that results

[8] This entire problem arises because of ACS' exercise of its prerogative to operate under rate of return regulation, rather than a price cap plan, in the interstate jurisdiction. If ACS were to elect to operate under price cap regulation in the interstate jurisdiction, ACS' allowable revenues would be based on a price cap, and not subject to the revenue offset that complicates the Commission's task in establishing a wholesale discount. While price caps are generally regarded as an appropriate form of regulation for companies facing increasing levels of competition – allowing the possibility of higher returns for efficient performance – ACS apparently prefers to continue under rate of return regulation in the interstate jurisdiction. Code of Federal Regulations, Title 47 §61.41(a)(3)

from a reduction in retail customers. Similarly, the costs of equipment, maintenance contracts, etc., associated with preparing and rendering retail bills may simply disappear as a consequence of reduced workload, or may require management intervention to rearrange activities and equipment in order to avoid costs associated with bills for customers no longer served at the retail level. Thus, in some cases, avoiding retailing costs may require a redeployment of assets and some time lag before costs actually go down. The duration of a time lag, if any, required to maintain the ACS organization in a cost minimizing posture depends crucially on the effectiveness of management.

Q. HOW DOES YOUR CALCULATION OF THE WHOLESALE DISCOUNT TAKE THESE EFFECTS INTO ACCOUNT?

A. It would be possible, although difficult, to propose a wholesale discount that incorporates an adjustment for the timing of implementation of the interstate revenue offset mechanism. The resulting wholesale discount would fall between the discounts resulting from the two approaches discussed above; it would be greater than the discount that results from ignoring avoided costs that are allocated to the interstate jurisdiction, but smaller than the discount that would result from removing such costs from wholesale rates. Rather than taking this approach, I simply calculate a wholesale discount that does not remove the interstate allocation of avoided costs from wholesale rates. In my judgment, this approach is the most reasonable accommodation that can be made to conflicting considerations. This approach results in ACS recovering, through wholesale rates charged to resellers, the costs of retailing functions that ACS no longer

performs, and it allows ACS to recover these costs twice – once through wholesale rates and again through interstate revenues – in the period before the interstate jurisdiction's revenue offset is implemented. While this interim period cannot be easily estimated with any precision, I expect that it is a substantial portion of the term of the interconnection agreement during which the arbitrated wholesale discount will apply. This approach places resellers at a clear competitive disadvantage by requiring the payment, through wholesale rates, for the cost of retailing functions that ACS doesn't perform but resellers must perform to provide for their retail customers. But the approach avoids denying ACS recovery of costs for which it relies on revenues from the interstate jurisdiction, which would be removed after retailing costs are avoided and after the interstate jurisdiction's regulatory lag has run its course. Because this approach implies a period of double recovery of retailing costs that will be avoided, I believe it should be regarded as making a generous allowance for any delay that ACS may experience in actually avoiding those costs that are not immediately and automatically avoided when a retail customer switches away from ACS.

Q. WOULD IT BE APPROPRIATE TO ACCOMPLISH THIS ADJUSTMENT BY SIMPLY USING JURISDICTIONALLY SEPARATED RESULTS OF OPERATION FOR THE ENTIRE DISCOUNT CALCULATION?

A. No. This would embed the separations process into calculation of the share of indirect costs that are avoided when ACS no longer has to perform retail functions for a customer. This is because the wholesale discount is calculated by

first estimating direct costs that will be avoided when a customer is no longer served on the retail level, then using this direct cost calculation to estimate the amount of indirect cost that will be avoided as a consequence of avoiding activities that are accounted for as direct costs. I perform this calculation with accounting results that have not been "adjusted" by operation of separations procedures, then I remove from the calculation the share of avoided costs that was allocated to the interstate jurisdiction. If the direct cost calculation were performed with jurisdictionally separated results, all of the policy considerations, unrelated to cost causation, that are implemented through the jurisdictional separations procedures would be incorporated into the wholesale discount calculation. The fact that jurisdictional separations procedures reflect policy considerations unrelated to cost causation is widely recognized. In its "overview" introducing the section "Problems with Separations," the state members of the federal-state joint board on separations noted: "The existing separations system, dependent in part on usage-based measurements, has been criticized by many parties as being increasingly irrelevant to cost causation and as creating unnecessary compliance costs."[9] Jurisdictional separations rules were first established in 1947 for an all analog, circuit-switched network providing virtually all voice-grade services, and have evolved as a patchwork of policy implementing provisions, growing further and further away from notions of cost

[9] *State Members' Report on Comprehensive Review of Separations*, CC Docket No. 80-286, filed December 21, 1998

causality.[10] In May of 2001 the FCC recognized the need for "comprehensive reform" of jurisdictional separations procedures and implemented a freeze of categories and allocation factors in the current rules in order to simplify and stabilize the effect of separations until the complete overhaul can be completed.[11] In a subsequent "Glide Path" paper, the state members of the federal-state joint board proposed that "accuracy of cost allocations" should be regarded as a goal "of reduced importance" in the comprehensive reform needed for jurisdictional separations.[12] As it stands today, jurisdictional separations is an overly complex instrument to implement policy, awaiting comprehensive reform or replacement, not a reflection of cost causation.

Q. DO YOU PROPOSE THE SAME TREATMENT OF THE SEPARATION OF INTRASTATE-ALLOCATED COSTS BETWEEN LOCAL SERVICE AND INTRASTATE ACCESS CHARGES?

A. No. ACS - Anchorage no longer participates in the intrastate access charge pool and operates with a price ceiling for intrastate access charges.[13] Consequently, there is no mechanism by which avoidance of retail costs will result in an offsetting reduction in access charge revenues. If costs allocated to intrastate access that will be avoided when ACS no longer serves a customer at the retail level are not included in the wholesale discount, then those costs will be included

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[10] See *Report and Order*, CC Docket No. 80-286, FCC 01-162, Adopted May 11, 2001

[11] *Id.*

[12] *Options for Separations: A Paper Prepared by the State Members of the Separations Joint Board*, Approved December 17, 2001, at page 8

[13] Alaska Intrastate Interexchange Access Charge Manual, Article 102

in wholesale prices paid by a reseller, and also recovered through intrastate access charges, resulting in double recovery of those costs. The dilemma created by jurisdictional separations and the revenue offset that arises in recovery of interstate revenue requirement is simply not an issue when it comes to avoided costs allocated to intrastate access charges.

C. The Eighth Circuit's Distinction between Avoided and Avoidable Costs

Q. PLEASE DESCRIBE THE DISTINCTION BETWEEN AVOIDABLE COSTS AND AVOIDED COSTS, AND INDICATE YOUR APPROACH TO PROJECTING COSTS THAT WILL BE AVOIDED IN THE FUTURE, AS REQUIRED BY THE EIGHTH CIRCUIT.

A. The Eighth Circuit found that the statute requires exclusion of "those costs that the ILEC will actually avoid incurring in the future, because of its wholesale efforts, not costs that 'can be avoided.'"[14] The Court found that the FCC erred by adopting a standard of reasonable avoidability, contrary to the statutory standard of costs that will be avoided.[15]

I approach the task of projecting the costs that will be avoided by first identifying costs that are avoidable, then proceeding to the question of what portion of those avoidable costs can reasonably be expected to actually be avoided. For the identification of costs that are avoidable, I give substantial weight to the analysis

[14] Eighth Circuit Decision at 17

[15] *Id.*

of comments and the conclusions reached by the FCC in its First Report and Order. These analyses and conclusions regarding which costs are avoidable were not called into question by the Eighth Circuit's Decision, nor have they been contested in ACS' previous wholesale discount filings. The Eighth Circuit's finding was that the FCC adopted the wrong standard, "avoidable" rather than "avoided." Since the identification of avoidable costs is a logical precursor to projecting and quantifying costs that will actually be avoided, the import of the Eighth Circuit Decision is that the FCC failed to proceed to the required step of determining the portion of avoidable costs that will actually be avoided. In taking this final step from avoidable costs to costs that will be avoided I consider the treatment of avoidable costs, which may or may not actually be avoided, from the perspective of determining regulatory revenue requirement, and from the perspective of economic analysis.

Implication for Regulatory Revenue Requirement

Q. FROM THE PERSPECTIVE OF DETERMINATION OF REGULATORY REVENUE REQUIREMENT, WHAT ANALYSIS IS SUGGESTED FOR THE STEP FROM AVOIDABLE TO AVOIDED COSTS?

A. Regulatory proceedings routinely face the task of determining the level of expenses to be allowed as part of the revenue requirement recovered through a regulated company's rates. The mere production of accounting records indicating that transactions were completed and expenses were incurred does not determine whether the expense will be allowed as part of the revenue requirement, or disallowed as unnecessary to the provision of services for which

rates are being set. If an expense is avoidable, but, for whatever reason, is not avoided, there is a strong suggestion that the expense will not be included as part of the regulatory revenue requirement, and will not be included among the costs to be recovered from ratepayers.

Implication for Economic analysis

Q. FROM THE PERSPECTIVE OF ECONOMIC ANALYSIS, WHAT CONSIDERATIONS ARE SUGGESTED FOR THE STEP FROM AVOIDABLE COSTS TO COSTS THAT WILL BE AVOIDED?

A. The presumption that firms minimize the cost of whatever products or services are produced is among the most fundamental tenets of economic analysis, and ACS asserts that cost containment is an important part of its management strategy.[16] Indeed, as a logical matter, the phrases "cost of production" and "cost of service" have little meaning without the assumption that costs, other than those necessary for the "production" or "service" under discussion, are excluded. The assumption that expenses that are avoidable will indeed be avoided is implicit in our very definition of the word "cost."

[16] ACS makes regular claims as to management effort to avoid unnecessary costs. For example, the transcript of ACS' most recent conference call announcing quarterly earnings results, July 31, 2003 included the following: "Importantly, EBITDA margin improved substantially in our local telephone and wireless business. In local telephone, this is a direct result of our effective cost management efforts and our aggressive 2002 restructuring program." Transcript produced by Fair Disclosure Financial Network Inc.

Q. IS IT POSSIBLE THAT ACS PLANS A STRATEGIC INCREASE IN RETAILING EXPENDITURES AS A RESPONES TO COMPETITION AND REGARDS THIS AS AN OFFSET AGAINST COSTS AVOIDED WHEN A CUSTOMER IS NO LONGER SERVED BY ACS ON A RETAIL BASIS?

A. This is possible, but it is not appropriate to charge higher wholesale rates to cover ACS' strategic response to competition. First, the bulk of the costs to be excluded from retail rates are costs of serving existing retail customers – taking service orders, rendering bills, taking reports of service problems, etc. By and large, these costs automatically cease when a retail customer terminates service, and don't resume because ACS decides to do a better job with remaining customers. If ACS changes its strategy in favor of providing better, and more costly, customer service to its retail customers, then the cost avoided when one of those customers chooses GCI will be greater than before, and the wholesale rate calculation should take this into account. Other costs – marketing costs – are not, in general, associated with existing retail customers, but are associated with the effort to win new customers and thus vary with the scale of the firm's retail activity. The Act specifically mentions the exclusion of marketing costs, recognizing that costs avoided by reducing the scale of the retail activity should be excluded from wholesale rates.

The Eighth Circuit's Distinction May Rest On Possible Differences between Incremental Avoided Costs and Average Avoided Costs

Q. PLEASE EXPLAIN YOUR UNDERSTANDING OF THE EIGHTH CIRCUIT'S DISCUSSION AS IT RELATES TO COST STRUCTURE.

A. As indicated above, it is simply implausible that any reasonable interpretation of the Act would allow an ILEC to decide, for whatever reason, to continue to incur expenses that could be avoided, and to include those avoidable expenses in wholesale rates. From the point of view of economic analysis, such avoidable expenses are not a part of the cost of service. From the point of view of determining regulatory revenue requirement, such expenses would be disallowed from recovery through regulated rates, whether retail or wholesale.[17]

Another possibility for the Eighth Circuit's rationale arises from the following language from the Eighth Circuit's Decision:

> The statute recognizes that the ILEC will itself remain a retailer of telephone service with its own continuing costs of providing that retail telephone service. The FCC's rule treats the ILEC as if it were strictly a wholesaler whose sole business is to supply local telephone service in bulk to new purveyors of retail telephone service.[18]

Apparently the Eighth Circuit was referring to the following FCC language:

> In other words, the avoided costs are those that an incumbent LEC would no longer incur if it were to cease retail operations and instead provide all of its services through resellers.[19]

[17] Of course, wholesale rates will necessarily be passed on to retail customers, and end users will ultimately be paying for either.

[18] Eighth Circuit Decision at 17

[19] First Report and Order at ¶ 911

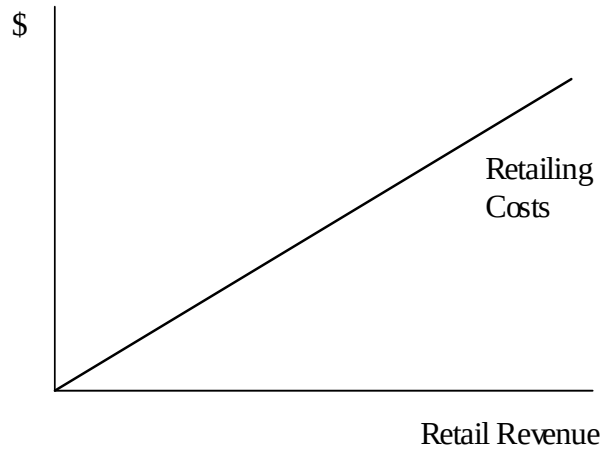
The consequence of this facet of the FCC's analysis was that the total amount of retailing costs, excludable from wholesale rates under the prescription of the Act, was to be identified by invoking the hypothetical wholesale-only firm, and the costs thus identified were to be removed from retail rates on a 'pro rata' basis. In effect, this approach rests on the assumption that the retailing costs referenced in the Act are proportional to retail revenues. If this assumption is mistaken it is possible that removal of retailing costs on a 'pro rata' basis will remove too much or too little cost, relative to the amount of cost that will actually be avoided by not having to provide retail functions to the customers at issue. In essence, this is a question about the structure of costs, or the nature of the relationship between cost and output.[20] If retailing costs are proportional to output or revenue, then the FCC's implicit assumption is vindicated, and a reduction in scale of retail activity (loosing retail customers to competitors) results in a proportional reduction in retailing costs; retailing costs will actually be avoided in proportion to the retail prices against which a wholesale discount is applied. If the cost structure is something more complicated than simple proportionality, then the retailing costs avoided may be more or less than proportional to retail prices and revenue, and, in general, application of a simple wholesale discount percentage will not suffice to reduce a retail rate to a wholesale rate in a manner that is consistent with the Act's requirement of removing avoided costs.

[20] The relationship between cost and output or between cost and revenue amount to essentially the same thing because output and revenue are simply two different scales for the volume of the firm's business.

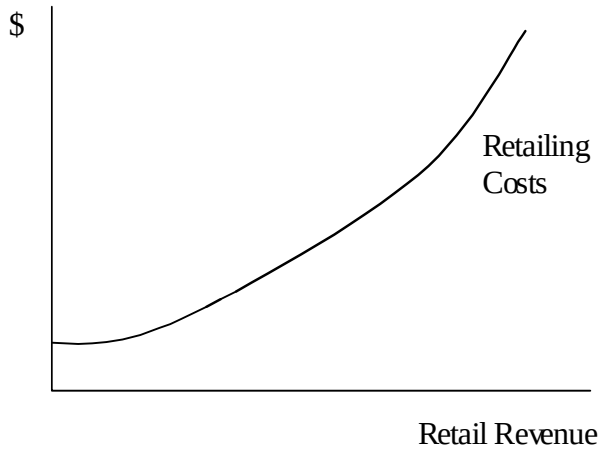
Q. CAN YOU SHOW GRAPHICALLY THE RELATIONSHIP BETWEEN RETAILING COSTS AND TOTAL RETAIL REVENUE IN THE CASE OF PROPORTIONALITY AND OTHERWISE?

A. Yes. The graphs below show two possibilities. The graph on the left shows the case where retailing costs are proportional to retail revenue. Retailing costs increase by a constant factor of proportionality as retail revenue increases. If two firms have different levels of retail activity, as reflected in their retail revenue, the firms' costs associated with retailing activities will be proportional to their retail revenues. Likewise, if a firm loses retail customers and thereby reduces the scale of its retail operation, its retailing costs will be avoided in proportion to the reduction in retail revenue. In this case, applying a factor of proportionality – the wholesale discount – to a retail price or a reduction in retail revenue[21], determines the amount of retailing cost that will be avoided. Note that the simple proportionality relationship allows the use of a single discount factor to apply throughout the range of possible levels of retailing activity.

[21] A retail price is just the reduction in retail revenue that results when the company loses a single unit of retail output.



Proportional retailing costs



Non-proportional retailing costs

The graph on the right shows a case where simple proportionality does not apply at the upper and lower ends of the range of retail revenue. Under this relationship between retailing costs and the scale of retail activity, calculating a discount factor as described above will accomplish the statutory prescription for excluding avoided costs in the middle of the range of possible levels of retail activity, but not at the two extremes. If a firm at the extreme low end of retail activity reduces its scale of retail activity even further, it will move to the left on the retailing costs curve, and costs avoided will be less than proportional to the reduction in retail revenue. For a firm initially operating at the extreme high end of the range of retail activity, a reduction in retail activity will mean a movement down the steep portion of the retailing costs curve, and retailing costs avoided will be more than proportional to the reduction in retail revenue. Note that the

ubiquitous practice of calculating a constant discount percentage will not suffice, under this cost structure, to carry out the removal of avoided costs prescribed in the Act. Except in the middle portion of the curve, where retailing costs are approximately proportional to retail revenue, avoided costs will be a different proportion of retail price, depending on what part of the curve is relevant. Further, outside the part of the curve that reflects rough proportionality, the discount factor to apply for that particular part of the curve cannot be calculated by simply dividing retailing costs by retail revenue, as is the universally accepted practice.

Q. IS THERE A COST STRUCTURE THAT LACKS PROPORTIONALITY BUT LENDS ITSELF TO A SIMPLE WHOLESALE DISCOUNT CALCULATION?

A. As a theoretical matter it is possible, but I don't believe such a structure is likely under any realistic scenario. Such a cost structure is certainly not supported by the empirical evidence for proportionality discussed below. As a theoretical matter, retailing costs could involve a fixed component, which must be incurred to serve the first retail customer and cannot be avoided without completely abandoning retail operations altogether.[22] Such fixed costs make sense only in a very short run scenario. With time to redeploy assets and personnel within the firm, dispose of assets, adjust staffing levels, etc., and where appropriate

[22] In discussing positions of the parties, the Eighth Circuit notes that "petitioners state that many costs associated with retailing are fixed and will not begin to decline initially nor will the costs decline proportionately to the number of customers lost to the reseller."

incentives for such actions are in operation, such fixed costs don't arise.[23] Insofar as time is required for adjustments to be made in order to avoid certain retailing costs, my wholesale discount calculation proposes a substantial allowance for this effect.

Q. ARE FIXED COSTS THE SAME AS SUNK COSTS?

No, but confusion often arises between the two. Sunk costs may be fixed, or may vary with the level of some activity, before the cost is incurred; but once a sunk cost has been incurred it becomes history and cannot be recovered. Costs can also be fixed (at least in the short run) with respect to the levels of activities or outputs, but not sunk in any significant sense. Insofar as some of ACS' retailing costs are sunk – the money has been spent and cannot be recovered – and ACS' level of retail activity no longer supports the level of cost that ACS incurred, the Commission faces the question of whether the investment or expense is properly part of regulatory revenue requirement, as discussed above. In such a case the Commission should certainly avoid taking actions that diminish ACS' incentive to mitigate the loss and avoid incurring such costs in the future. Providing for recovery of such sunk costs through wholesale rates would create a very perverse incentive for ACS to incur all retailing costs in a way that makes them sunk costs and not subject to avoidance in the event of a reduction in its scale of retail activity. For instance, ACS could outsource the retail function

[23] The cost of a business license is the only really good example I know of, and it is trivial in magnitude.

of receiving trouble reports and performing associated initial testing by entering into a contract that provides for a fixed monthly payment that doesn't depend on the number of retail customers ACS serves. The cost of this contract – when negotiated – will surely vary with the expected volume of retail activity, but once the contract is signed the cost becomes sunk for the duration of the contract. If the Commission were to regard such a cost as one that will not be avoided and should therefore be recovered through wholesale rates, ACS will have an incentive to disadvantage resale competitors by incurring costs in such a manner and not acting to mitigate such costs by, for example, seeking to renegotiate the contract after a reduction in retail activity.

Q. ARE MULTIPRODUCT COST CONCEPTS SUCH AS ECONOMIES OF SCOPE RELEVANT TO THIS DISCUSSION?

A. As a theoretical matter, yes. As a theoretical matter, it is possible that there are economies of scope between retail activities and wholesale activities, so that a reduction in the level of retail activity will increase some measure of wholesale costs. However, the conventional practice of separating out retailing costs and using retail revenue as the measure of output accomplishes everything that is humanly possible to give effect to the considerations raised by possible complications from multiproduct cost functions.

Q. IS PROPORTIONALITY OF COST AND OUTPUT A COMMON ASSUMPTION?

A. For the purposes of designing rates to recover a revenue requirement, proportionality is the almost universally adopted assumption. While other cost structures are possible, they raise concerns that are not addressed in conventional rate design analyses. Indeed, the wholesale discount calculations presented by ACS earlier in this arbitration relied on the assumption of proportionality.

Retail Costs Vary with Volume, Approximately Proportionately

Q. ARE EMPIRICAL STUDIES AVAILABLE THAT ESTIMATE THE RELATIONSHIP BETWEEN RETAILING COSTS AND LEVEL OF RETAIL ACTIVITY FOR LOCAL EXCHANGE COMPANIES?

A. I'm not aware of any such studies. Such a study, if it were available, would adopt one of two approaches: One approach would be to perform statistical analysis on many similar companies to ascertain whether the relationship between retail output (or retail revenue) and retailing costs is proportional. Proportionality would result in the retailing cost curve discussed above approximating a straight line starting from zero retailing costs and zero retail revenue. A failure of proportionality would be indicated by appearance of something like the curved line depicted above, or the presence of substantial levels of retailing costs associated with very low levels of retail activity. The other approach would be to perform an engineering study, such as a forward-looking UNE cost study, to look for the same phenomena. I'm not aware of either of these types of study having been addressed to the question of proportionality of retailing costs.

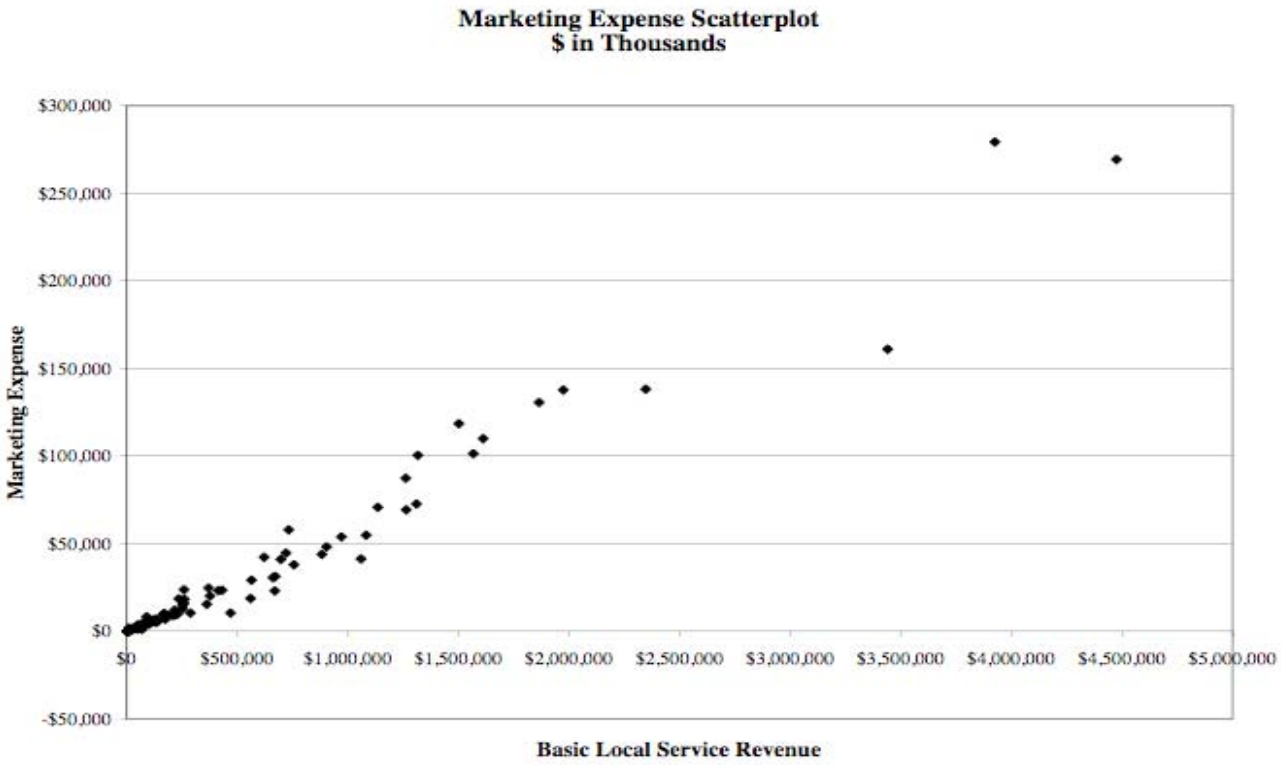
Nevertheless, a rough test of the reasonableness of the assumption of proportionality of retailing costs relative to retail output or revenue is provided by examination of the following scatter plots.

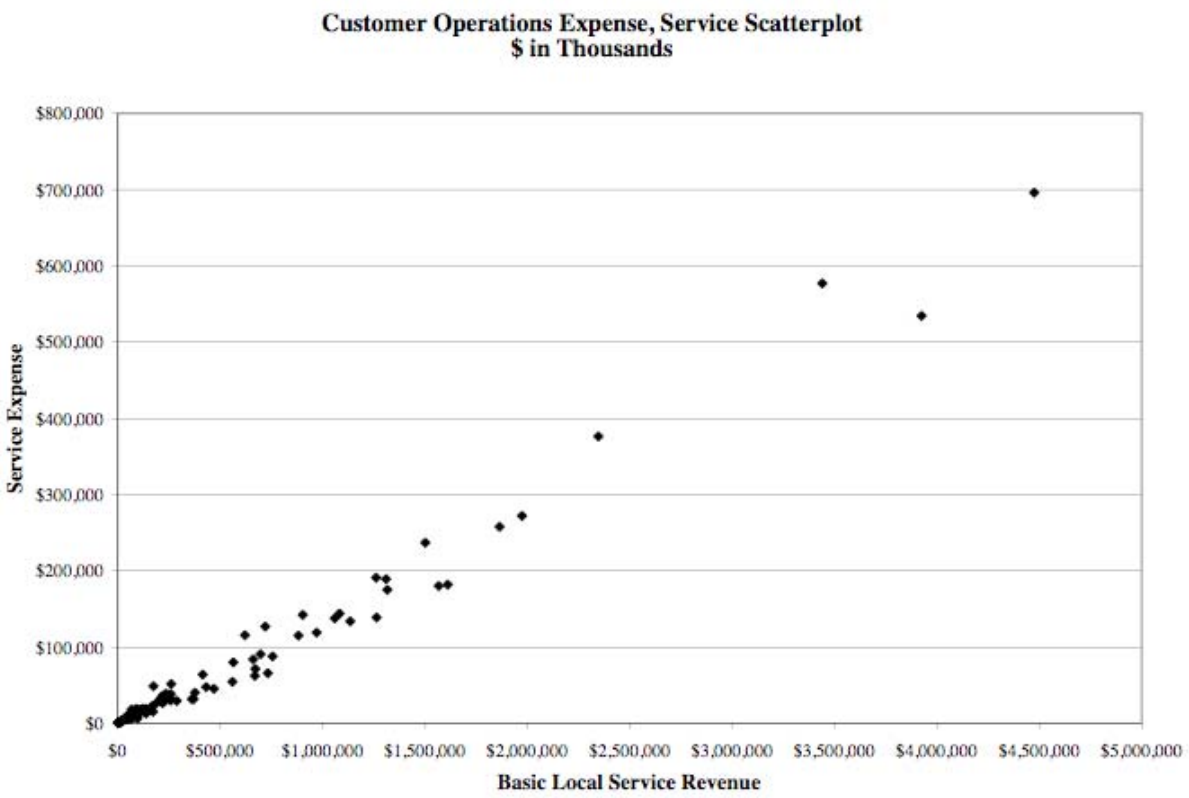
The following graphs shows the relationship between local revenue and Customer Operations Marketing and Customer Operations Services expense for the 99 study areas for which ARMIS financial reporting was available for calendar year 2002.[24] The size of the study areas, as measured by basic local service revenue, ranges from approximately a tenth that of ACS, Anchorage (Contel Arizona and Contel Indiana) to the largest study areas in the country (Verizon New York, SBC California). While there are numerous reservations that argue against reaching too strong a conclusion from these data, they do support rough proportionality between local revenue and retailing expenses.[25] The expense aggregates shown correspond closely to the categories in the wholesale discount calculations discussed below. Customer Operations Marketing is the sum of Product Management, Sales and Product Advertising. Customer Operations Services is the sum of Call Completion, Number Services and Customer Services. These two aggregates capture all direct retail avoided expenses

[24] The data is taken from FCC Report 43-01 and is provided in Exhibit RC-2.

[25] A few reservations about the data are the following: The data reflect the study area level of aggregation rather than the company level, which may or may not be more appropriate. Study area data is more appropriate for direct comparison to ACS-Anchorage data, but data at the company level may be more reflective of cost causation. The adjustments necessary to reach retail revenue and a more accurate measure of retailing costs have not been made. The structural relationship between retailing costs and retail revenue probably varies among the study areas for a variety of reasons, none of which are controlled for here.

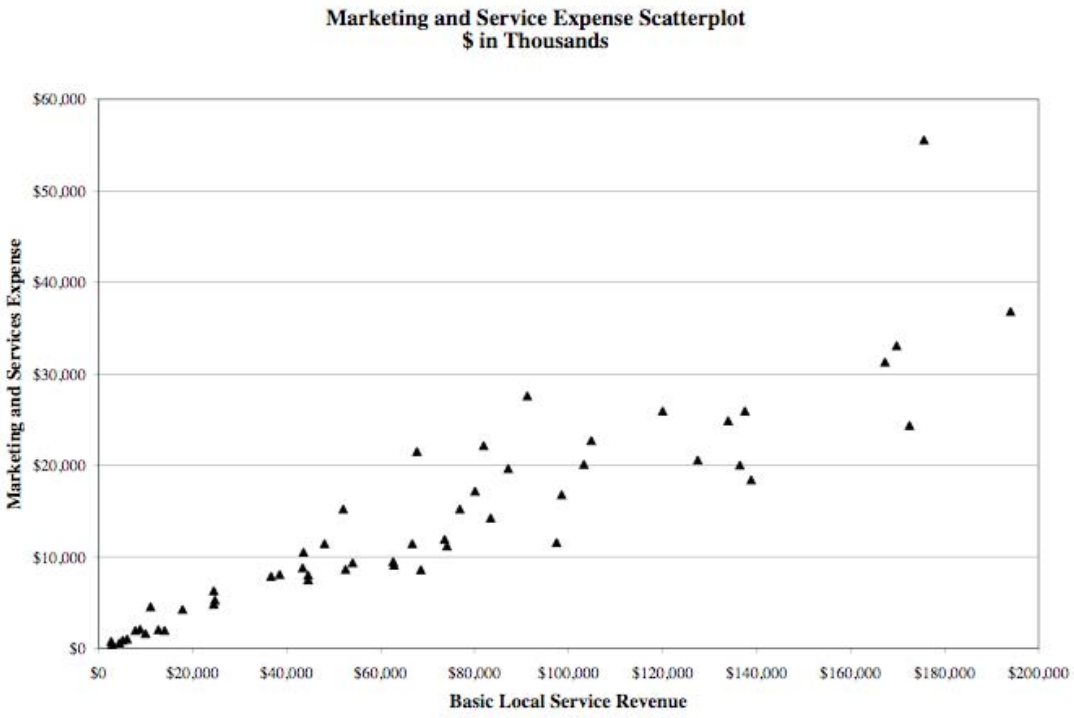
except Testing and Operator Systems. All observations appear to be scattered about a straight line with no minimum level of retailing expenditure required for the lowest levels of revenue.





The following graph is based on the same data, showing the sum of Customer Operations Marketing and Services, but on a scale that shows only the smaller study areas - those reporting basic local service revenue less than $200 million. Essentially the same relationship appears: a strong suggestion of proportionality, with some variation among the observations that a more sophisticated study would seek to explain. None of the three graphs shows the hallmarks of non-proportionality: strong curvature in one direction or the other, or

a minimum level of retailing expense – above zero – that appears to be maintained even in study areas at the lowest levels of revenue.



Q. WHAT IS YOUR CONCLUSION REGARDING PROPORTIONALITY BETWEEN REVENUE AND RETAILING COSTS?

A. I have seen no evidence of a lack of proportionality. I suspect that any legitimate concern regarding non-proportionality arises from the presence of some level of costs that are fixed in the short run. When a local exchange company reduces the scale of its retail operation, certain costs will be avoided only after management takes some action, and that action may take some time. My

wholesale discount calculation makes an allowance for the time it takes to adjust to a lower level of retail activity in order to actually avoid some of the costs that are properly treated as avoidable. While I believe that such an allowance is reasonable, I urge the Commission not to adopt the course of relieving ACS of all incentive to make the required adjustment. I believe this would be the consequence of setting wholesale rates that allow recovery of costs that are avoidable, and will actually be avoided when ACS makes the necessary adjustments.

Avoiding Retail Costs in a Competitive Wholesale Market

Q. YOU OBSERVED ABOVE THAT THE STATUTORY STANDARD FOR CALCULATING WHOLESALE PRICES ARTICULATES THE OUTCOME OF COMPETITION AMONG PROVIDERS AT THE WHOLESALE LEVEL. DOES THIS OBSERVATION SUGGEST ANALYSIS RELEVANT TO THE DISTINCTION BETWEEN AVOIDABLE AND AVOIDED COSTS?

A. Yes it does. With the prospect of competition developing in Alaska's local exchange markets, it has never been more important for regulated rates to accomplish the longstanding goal of reflecting the outcome of competition. If alternative wholesale providers were in competition with ACS for the business of resellers, the resulting wholesale rates would reflect the prescription of the Act to remove all "costs that will be avoided by the local exchange carrier." Competition at the wholesale level would have the further advantage of creating incentives for local exchange carriers to avoid all costs that are avoidable. In the absence of wholesale competition it is possible to set wholesale rates that shield the local exchange carrier from incentives to actually avoid costs that can be avoided, and simultaneously hamper the operation of competition at the retail level that would

be possible with properly set wholesale rates. When wholesale rates reflect the discount that would result from competition among alternative wholesale providers, ACS will face the incentives of a truly competitive company at the retail level. These incentives will encourage ACS to provide the best service possible to customers, while controlling costs by actually avoiding any cost that can be avoided. I urge the Commission, in order to foster healthy local exchange competition in Alaska, to set a wholesale discount that mimics the outcome that could be expected if there were vigorous competition at the wholesale level.

Calculation of Wholesale Discount

Q. PLEASE EXPLAIN YOUR CALCULATION OF THE WHOLESALE DISCOUNT.

A. The calculation is performed in an Excel spreadsheet, attached as Exhibit RC-3. The first step is to list all direct expenses, by USOA account. The expenses that will be avoided with a reduction in ACS' retail business are calculated for each account that contains such avoided expenses. The sum of avoided direct expenses can then be calculated.

The share of indirect expenses attributable to avoided retailing activities is calculated as the ratio of avoided direct expenses to total direct expenses. For the purpose of developing a measure of the total level of activity that places demands on indirect costs, the list of direct expenses is augmented with an estimate of capitalized expenses. Activities associated with current investment, such as the work of engineers designing new facilities, place demands on indirect costs, but are recorded in balance sheet accounts rather than expense

accounts. To neglect such activities in estimating the share of indirect costs attributable to avoidable activities would overstate the wholesale discount.

After the ratio of avoided direct costs to total direct costs is calculated it is applied to indirect expenses to determine the amount of indirect expenses attributable to avoided activities. Indirect expenses includes an amount to cover return and taxes on general support facilities investment. Finally, the fractions allocated to the federal jurisdiction for the various direct and indirect expense accounts are applied to the avoided portions of these accounts to arrive at the "separations adjustment." This adjustment removes from the discount, allowing to remain in wholesale rates, avoided costs that are allocated to the interstate jurisdiction and will be subject to a revenue offset after the cost is actually avoided and the regulatory lag catches up to the reduction in costs. As discussed above, the benefit of revenue to cover avoided costs in this interim period, before the federal revenue offset takes effect, allows for an adjustment period for any actions ACS has to take in order to actually avoid certain of the avoidable costs.

Finally, the total amount of avoided direct and indirect costs is divided by retail revenue to produce the wholesale discount. Details of the calculation are contained in Exhibit RC-3

Q. YOUR CALCULATION DOESN'T INCLUDE DEPRECIATION AS A DIRECT EXPENSE. PLEASE EXPLAIN.

A. Depreciation is a measure of the current year's loss in value sustained by assets acquired over many previous years. Depreciation doesn't represent an actual outlay, but an attribution to the current year of the inevitable "using up" and "wearing out" of historically acquired assets. As such it is not pertinent as a measure of activity that places demands on indirect costs. My direct cost measure properly includes expenses undertaken to maintain, repair, and operate those previously acquired assets, and it takes care to include expenses undertaken to acquire new assets in the current year. These latter expenses would be capitalized and excluded from direct cost for many purposes, but they are properly included in direct cost as a measure of the level of the firm's activity that places demands on indirect costs.

D. Discussion of Avoidable Percent by Account

Q. PLEASE DISCUSS THE DIRECT COST ACCOUNTS THAT RECORD RETAIL AVOIDED COSTS, AND YOUR ESTIMATES OF THE PERCENTAGE AVOIDED IN EACH ACCOUNT.

A. Direct costs that will be avoided when ACS ceases to provide retail service to a customer fall into three groups of expense accounts: Customer Operations Expense, Operator Systems Expense (Account 6220), and Testing Expense (Account 6533). Customer Operations includes Marketing and Services, which are further broken down as follows: Marketing includes Product Management (Account 6611), Sales (Account 6612), and Product Advertising (Account 6613).

Services includes Call Completion Services (Account 6621), Number Services (Account 6622), and Customer Services (Account 6623).

The Act requires removal of "marketing, billing, collection, and other costs that will be avoided by the local exchange carrier." §252(d)(3) Customer Operations Marketing Expense (Accounts 6611, 6612, and 6613) corresponds precisely to the first category mentioned in the Act. Customer Services (Account 6623) records expenses incurred to establish and service customer accounts, such as billing, collection and similar functions. The FCC observed that costs recorded in Customer Operations Marketing, together with Customer Services (Account 6623) "are the direct costs of serving customers," and presumed that the entirety of these costs would be avoided.[26] For Customer Services (Account 6623) some additional information was disclosed in ACS-ANC Wholesale Cost of Service Study, 2002 Part 36. I relied on this information to develop a percentage of expenses recorded in Account 6623 that will be avoided when ACS ceases to provide services to a retail customer, and concluded that the appropriate percentage is 92.4%. This calculation is provided in Exhibit RC-3. It might be possible to refine this calculation with better access to ACS' detailed accounting records. For the other accounts in this group (Accounts 6611,6612, 6613) I believe that it was reasonable for the FCC to conclude that the entirety of these accounts would be avoidable, and I see no reason why these costs will not

[26] First Report and Order, at ¶ 917

actually be avoided. ACS has consistently refused to provide information on accounts at a finer level of detail than is available through the Uniform System of Accounts. From the account definition of the Uniform System of Accounts I have no basis for concluding that any expenses recorded in these accounts will not be avoided. Nevertheless, in the interest of developing a conservative estimate, my calculation presumes that 90% of expenses recorded in these accounts will be avoided. The two remaining accounts in Customer Operations, Services are Call Completion Services and Number Services. Number services comprises the cost of providing customer number listings through directory assistance or other means. GCI requests that ACS continue to perform this service for customers that GCI serves at retail by reselling ACS wholesale service, and consequently none of this cost will be avoided by ACS. Call Completion Services (Account 6621) includes the cost of helping customers place and complete calls, except directory assistance. These are clearly retail functions that ACS will cease to provide for a customer that chooses GCI as its retail provider. While I expect all of these costs to be avoided, I apply 90% as the percentage avoided.

Additional costs that will be avoided are found in Operator Systems Expense (Account 6220) and Testing Expense (Account 6533). While GCI provides all operator functions for its retail customers, suggesting that the entirety of Operator Systems Expense will be avoided, I have applied a 90% avoided cost percentage. The Testing Expense account clearly includes retail functions that ACS will cease to perform when it no longer serves a customer on a retail basis.

For example, this account includes the cost of receiving, recording and analyzing trouble reports, testing to determine the nature and location of reported trouble conditions, and dispatching repair persons as needed. When a customer is served by GCI at the retail level, with ACS providing wholesale service, GCI routinely receives its retail customers' trouble reports. GCI routinely records these reports and undertakes whatever troubleshooting procedures are required to determine whether the trouble is in the customer's inside wire or in the network. Again, ACS has not provided any access to its accounting records at a finer level of detail than afforded by USOA accounts. Without such access to detailed ACS records, I have relied on GCI internal records of testing expense to estimate an avoided cost percentage of 20.6% for Account 6533. This calculation is shown in Exhibit RC-3.

As discussed above, I see no reason why any of these costs will not be avoided in proportion to the reduction in retail revenue associated with the customers served. Insofar as ACS may experience any delay in avoiding these costs, my proposal, discussed above, to allow double recovery of the interstate share of avoided costs during the lag before implementation of the federal revenue offset mechanism makes ample allowance for ACS cost recovery during a reasonable delay.

Comparison of UNE Loop Rates

Q. PLEASE DESCRIBE YOUR COMPARISON OF UNE LOOP RATES.

A. For state commission-approved UNE loop rates, I relied on the most recent edition of the survey prepared by Billy Jack Gregg, Director of the Public Service Commission of West Virginia's Consumer Advocate Division.[27] This survey was first conducted in the spring of 2001 to compare the results of state oversight of UNE pricing, and has been updated periodically. Average UNE loop rates for each state are calculated from incumbent RBOC rates approved by the state commissions, weighted by the number of lines in each zone, where rates are deaveraged by zone. The average UNE loop rates ranged from $4.29 to $23.72, with a weighted average of $12.72. All of the rates ACS has derived from its model are above the top of the range. All of the existing rates approved by this Commission are above the mean, and well within the range of other states' rates.

While this comparison shows something of the relationship between UNE loop rates around the country and ACS' existing and proposed rates, it takes no account of the variation among the areas for which other state commissions have adopted these rates. A simple way to take some account of that variation among the states is to "control for" differences among the states in embedded cost. While embedded cost is not a proper consideration or basis for the determination of UNE rates, the variation in embedded costs among the ILECs serves as a proxy for some of the determinants of forward-looking cost, and is a useful device

[27] *A Survey of Unbundled Network Element Prices in the United States (Updated July 1, 2003)*, by Billy Jack Gregg. Available at: http://www.cad.state.wv.us/2003%20Intro%20to%20Matrix.htm

in a comparison of commission decisions on UNE loop rates. Embedded cost data, for the same study areas included in the West Virginia PSC survey, are taken from the most recent NECA filing with the FCC, dated October 2002 and containing data from 2001.[28] All data and calculations are shown in Exhibit RC-4.

In order to control for differences in embedded costs among the states, I estimated a linear regression line from the 49 observations of embedded costs and approved UNE loop rates. This analysis shows that areas with higher embedded costs tend to have higher commission-approved UNE loop rates. The slope of the regression line is statistically significant at the confidence level of .9999999. That is, the probability of observing a pattern of data like that depicted in the chart below *by chance,* even though embedded cost was actually not a useful predictor of UNE rates, is less than 1 in 10 million. Note that the slope of the regression line (approximately .6) is substantially less than 1. This shows that UNE loop rates approved by commissions around the country are not simply set to reflect embedded costs. Indeed, the slope of this regression line shows that UNE loop rates approved in other jurisdictions average about 60% of the measure of embedded costs chosen for this analysis. Nevertheless, embedded cost is a useful proxy, or stand-in, for the various differences among states in

[28] Embedded cost is measured by USF unseparated revenue requirement per loop per month.

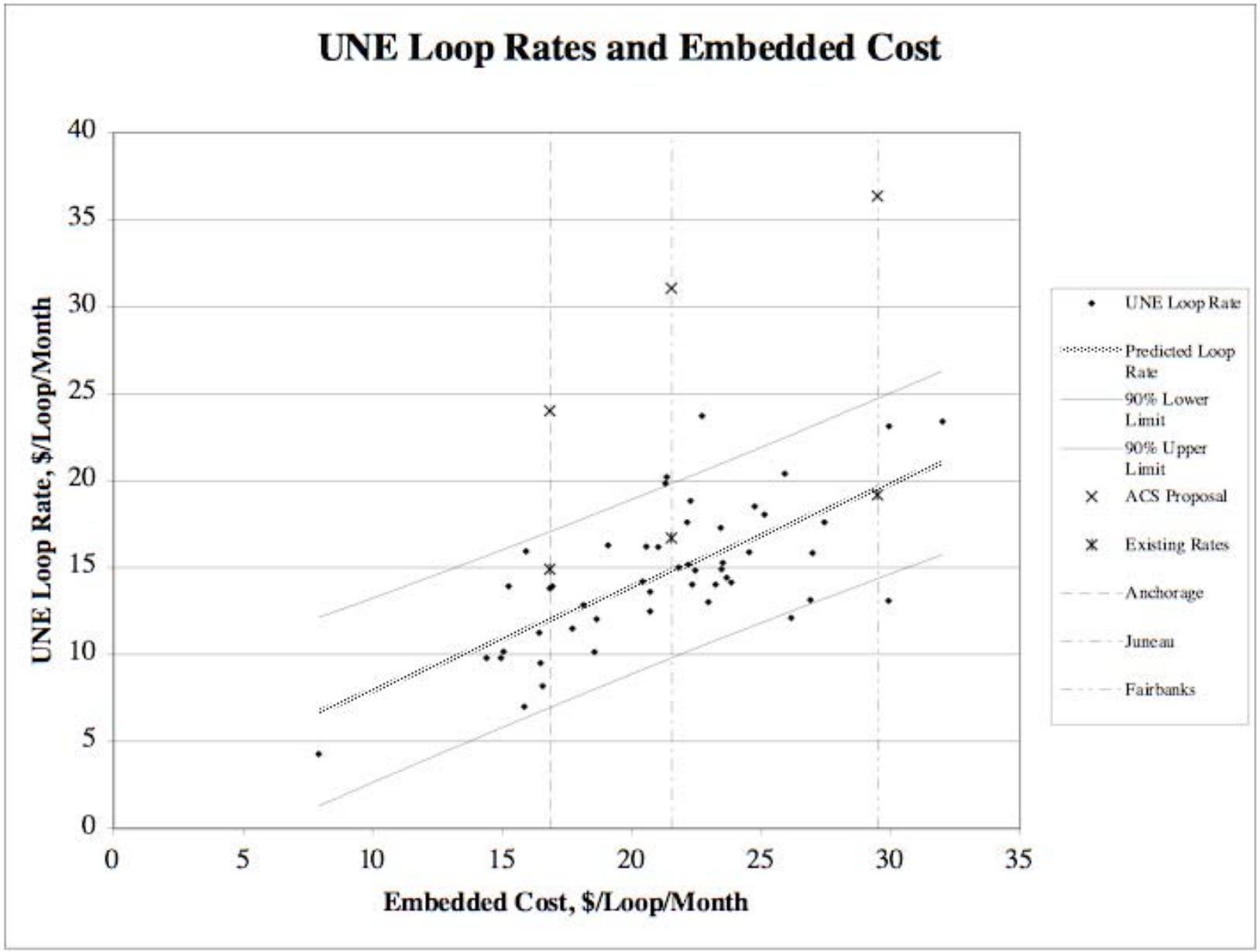
factors that make local telephone service more, or less, expensive to provide on a forward-looking basis in different locations.[29]

The graph below shows embedded cost on the horizontal axis and UNE loop rate on the vertical axis. The 49 available observations of embedded cost and approved UNE loop rate appear as small diamonds. The regression line that determines the predicted UNE loop rate for any level of embedded cost is the thick shaded line passing approximately "through the middle" of the diamonds indicating observations. This line can be thought of as an average UNE loop rate, controlling for differences in embedded cost.[30] Simple examination of the graph suggests that observed UNE rates are higher for states with higher levels of embedded cost, so that knowledge of the level of embedded cost will be useful in developing the expected UNE loop rate, but there is clearly still a substantial unexplained element to the process by which commission-approved UNE loop rates are determined. The relative magnitude of the unexplained component of the process is captured by a confidence interval. The solid lines bracketing the regression line show the 90% confidence interval for the UNE loop rate prediction indicated by the shaded regression line. That is, if we specify a level of embedded cost, then draw a UNE rate for that level of embedded cost, assuming

[29] While embedded cost is a useful proxy for factors that cause loops to be more or less expensive in different locations, a TELRIC cost model takes those factors into direct consideration. The statistical analysis I present can only provide an average indication of reasonableness; it should not be regarded as an alternative estimate of TELRIC cost.

[30] As discussed above, embedded cost is not a determinant of UNE rates, but is a proxy for differences among the states in the various factors that determine forward-looking costs, which are properly considered in setting UNE rates.

that the same process is at work that generates the observed diamonds, we would expect the resulting UNE rate to fall within the confidence interval 90% of the time. Stated differently, if a combination of embedded cost and UNE rate comes from the same process that generates the diamonds observed in 48 states and the District of Columbia, we can be 90% confident that it will fall within the solid 90% confidence interval lines. This reflects what happens with the observed diamonds; 5 of them, almost exactly 10%, fall outside the lines, 2 below the confidence interval and 3 above.


UNE Loop Rates and Embedded Cost
UNE Loop Rate, $/Loop/Month
Embedded Cost, $/Loop/Month
0
5
10
15
20
25
30
35
40
UNE Loop Rate
Predicted Loop Rate
90% Lower Limit
90% Upper Limit
ACS Proposal
Existing Rates
Anchorage
Juneau
Fairbanks

Applying this analysis specifically to the value of embedded cost reported for ACS Anchorage yields the following: If we expect the determination of UNE loop rates in Anchorage to bear the same relationship to embedded cost as observed in the other states, then the "expected value"[31] of UNE loop rate is $12.02. The 90% confidence interval for the UNE loop rate corresponding to ACS' reported embedded cost is from $6.96 to $17.07.

ACS' existing UNE rates appear in the graph as the double crosses, near the shaded regression line. Two are above the regression line, one slightly below. All three are well within the 90% confidence interval. I understand that GCI will propose a UNE loop rate of $7.08, also within the 90% confidence interval. It appears, graphically and statistically, that these points are entirely consistent with the observations of UNE rates approved by other commissions around the country, taking into consideration differences in embedded costs.

The rates that ACS derives from its cost model show a very different picture.[32] These rates are shown as Xs in the accompanying graph. These rates, derived from ACS' application of its cost model, are the highest three objects on the graph. Each of these points appears well above the solid line indicating the upper limit of the 90% confidence interval. Not only is it clear that ACS'

[31] This is expected value in the technical sense of mathematical expectation. It corresponds to the mean or average or most likely value of a random variable.

[32] The rate shown for Anchorage, at issue in this proceeding, is the last ACS position before filing of testimony. The rates shown for Fairbanks and Juneau are rates that ACS has proposed for filing as tariffed rates.

application of its cost model is not producing numbers that are consistent with observations from around the country, ACS' results are consistent in that they appear to hold a similar relationship to embedded costs, but are much higher than approved UNE loop rates. The three results of ACS' application of its model appear to be roughly proportional to embedded cost, just as commission-approved UNE loop rates around the country are roughly proportional to embedded costs, but ACS' application of its model produces results that are much higher than would be consistent with rates approved by other commissions. Indeed, ACS' application of its model produces rates that are approximately double the values predicted from regression analysis using rates approved by other commissions. My conclusion is that the rates that result from ACS' application of its cost model do not arise from the same process, or relationship to embedded costs, observed in the lower 48 states and the District of Columbia, and that ACS' application of its model produces results that are consistently very high relative to commission-approved rates in other states.[33]

Conclusion

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS ON WHOLESALE DISCOUNT RATES.

[33] It would be possible to calculate the probability that the ACS proposed rates actually do arise from the same process that generated the 49 observations on which this analysis is based, and the random component of the process accounts for the fact that they all fall so far from the other observations, and all land on the side of the interval representing high UNE rates. I have not undertaken this exercise because it is clear that this probability is an astronomically small number.

A. My testimony presents calculations of a wholesale discount rate according to the prescription of the Act, as interpreted by the FCC and the Eighth Circuit. The resulting rate is 33.3%. These calculations are based on the concept of avoided costs, and avoid the FCC's identification of avoided costs with reasonably avoidable costs, though, in the end, the two concepts are not very different. The difference between the two may be a period of time during which ACS must take action to actually avoid a cost that is reasonably avoidable. I discuss at some length a dilemma created by the sharing of jurisdiction over local exchange telecommunications between the state and federal jurisdictions. While there is no ideal choice between the horns of this dilemma, the choice that I recommend has the desirable characteristic of allowing ACS a period of adjustment after losing retail customers, during which to take whatever actions are necessary to actually avoid any avoidable costs that don't automatically cease when ACS reduces its level of retail activity. During this period, which corresponds to a lag in implementation of an interstate revenue reduction to offset avoided costs that are allocated to the interstate jurisdiction, ACS will continue to recover revenues sufficient to cover a substantial portion of avoided retailing costs. At the end of this period, ACS revenue and cost will be in balance, but GCI will continue to operate under the disadvantage of paying wholesale rates that include costs that ACS no longer incurs, but that GCI must incur, in addition to wholesale rates paid to ACS, in order to provide retailing functions that serve its own customers.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING YOUR STATISTICAL ANALYSIS OF COMMISSION-APPROVED UNE LOOP RATES.

A. Statistical analysis of commission-approved UNE loop rates from around the country cannot serve as a substitute for careful modeling of TELRIC costs, but can serve as a test of the reasonableness of existing or proposed UNE loop rates. As shown in the graph above, ACS' application of its cost model results in rate proposals that are approximately proportional to embedded cost, but ACS' results are about double the level that would be expected for commission-approved UNE loop rates in other jurisdictions with comparable levels of embedded cost. The three available results from ACS' execution of its model – the most recent proposal in this proceeding and the tariff proposals for Fairbanks and Juneau – appear in the graph as outliers far above the plot of UNE loop rates approved by other commissions. Existing UNE loop rates appear to be right in line with comparable rates observed around the country. GCI's proposed UNE loop rate is within the 90% confidence interval, based on the available evidence of UNE loop rates approved in other jurisdictions.

Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

A. Yes.